TO: DOE Nuclear Physics Grantees and Grant Applicants

SUBJECT: Submission of Proposals and Continuation Progress Reports

The Office of Nuclear Physics accepts only electronic submission of documents relating to existing and new awards. The required method and timing of a submission can be different depending on the type of submission. Hopefully, this guidance letter will clarify these differences and make explicit our expectations and length restrictions for each of these submitted documents. Please note that applicants submitting a grant application in response to an Isotope R&D or an Accelerator R&D solicitation notice should contact the Isotope R&D Program Manager or the Advanced Technology Research and Development Program Manager, respectively, for guidance separate from this document.

A new grant award is normally made for a grant period of three years, with a usual budget period of twelve months, defined by the start date of the grant. Initial funding is given for the first budget period and funding for the remaining budget periods are referred to as continuation funding. Progress reports are required three months prior to the start of a continuation budget period, normally near the end of the first and second budget periods. Guidelines on how to prepare a progress report are given below. Six months prior to the end of the grant period, normally in the middle of the third year of the award, a renewal application may be submitted to extend the grant for another three years or less. At any time during the grant period, a supplemental application can be submitted to request additional funding due to unanticipated changes either in the scope of work or in resources determined at the time of award to complete the work. It should be noted that grant recipients are responsible to acknowledge grant support for all published research by identifying the Department of Energy, Office of Science, Office of Nuclear Physics and your official grant ID number. (see http://science.energy.gov/funding-opportunities/acknowledgements/)

All grant applications must be submitted in response to a <u>solicitation notice</u>, i.e. a Funding Opportunity Announcement (FOA). Applicants must use the forms provided with the FOA to which they submit. FOA's, their corresponding application forms, and instructions are found on the central federal government website: <u>Grants.gov</u>.

Normally, new, renewal and supplemental applications should respond to the Annual FOA "FY20xx Continuation of Solicitation for the Office of Science Financial Assistance Program." New and supplemental grant applications in nuclear physics can be submitted any time. From time to time, additional FOAs with their own specific requirements and deadlines may also be issued by the Office of Nuclear Physics.

The quickest way to find an Office of Science (SC) related FOA is to go to the SC Grants and Contracts website (http://science.energy.gov/grants/foas/open/) which lists the Annual and Open FOAs, as well as information documents that describe the responsibilities and regulations associated with receiving a grant. Current open FOAs relevant to the Nuclear Physics Office are also collected at http://science.energy.gov/np/funding-opportunities/.

Once you know the FOA number, go to <u>Grants.gov</u>, where you can click on the link "Apply for Grants" and click on the Step 1 link "Download a Grant Application Package" and follow the instructions.

To search for all open FOAs, go to <u>Grants.gov</u>, click on the tab "Search Grants". Enter a key word in the "Keyword Search" box under "Basic Search Criteria". [Note: Using the key words "Office of Science" in quotation marks will help limit the selection of available awards for this office.] Clicking the FOA title link will take you to that FOA's webpage. Select the "Application" box underneath the FOA title header. You will then be sent to a webpage where you can download the application forms and instructions.

Office of Nuclear Physics Guidelines

for Preparation of New, Renewal, and Supplemental Applications

The official DOE application form you download from <u>Grants.gov</u> provides fillable fields. Prior to completing the form, it is recommended that you access the various guides and videos provided at http://www.grants.gov/web/grants/applicants/applicant-tools-and-tips.html

Within the downloaded Grant Application Package, you will find mandatory documents that must to be completed. In addition to the application instructions for these mandatory documents, the following is requested:

Mandatory Document "Research & Related Budget": Each major item on each DOE budget sheet should be justified in the "Budget Justification" attachment (Item K of "Research & Related Budget"). In particular, any permanent equipment costs, travel costs, or other direct costs must be explained. For Materials and Supplies, the budget should indicate the general types of expendable materials and supplies required with their estimated costs. The breakdown should be more detailed when the cost is substantial (>\$5,000).

It is important that you make the total budget for each year sum to the nearest thousands of dollars. Otherwise, our office may require revised budgets.

If your proposal includes multiple tasks (tasks normally correspond to different research programs conducted by multiple faculty on a single grant), separate three year budget pages with corresponding budget explanation pages for each task will be required. For applications with multiple activities (experiments), the budget explanation page should show the breakdown for each activity. Before submitting a new proposal with multiple tasks please consult with the relevant program managers as to whether this is an appropriate approach.

Mandatory Document "RESEARCH & RELATED Other Project Information": Within this mandatory document, you will find reference to the "Project Narrative" attachment. The Project Narrative represents the primary content of your research proposal. The Narrative will be the research proposal that will be sent out for review (along with the budget information). The guidelines provided below apply ONLY to this attachment and supersede any duplicate specifications given in the application instructions. Please note the following guidelines:

PROJECT NARRATIVE GUIDELINES

(Body Text Format: Single Spaced, 12pt font, 1" margins)

Title Page

In addition to the items requested in the application instructions, please provide the **Project Title**, **Grant Number** (if a renewal), and **Proposed Project Period**.

Optional Table of Contents

Number the pages of the proposal sequentially starting with the Project Introduction described below.

Introduction

Applications with separate Tasks should have separate Introductions for each task. Each introduction should be a maximum of 2 pages and should provide:

- An abstract summarizing the planned scope of work in 100 words or less. This abstract can be the same one used on the application form.
- For renewals, provide a concise summary of accomplishments from the preceding grant period.
- A short summary of the proposed work. This discussion should include objectives, a description of the basic approach, and the potential impact.
- A list of personnel.

Body of Narrative

The body of the narrative, including figures, must be no more than 17 pages in total (including the Project Introduction) for each task, with an additional five pages allowed for each additional senior researcher on single task applications. The authors of the application can organize the Project Narrative text at their discretion, subject to the requirements below. The Project Narrative should provide a more detailed discussion of the proposed work including:

- In the case of Renewals, the Project Narrative must include a concise description of past accomplishments and work in progress. This should be no longer than one third of the total Project Narrative. The accomplishments should include a discussion of publications during the project period including roles played by group members in each publication with substantial group contributions.
- The proposed work's impact on long-term goals, particularly in relationship to the Nuclear Science Advisory Committee (NSAC) Long Range Plan.
- The proposed work's impact on the present state of knowledge of the field.
- Any other work by the PI and its potential impact on this grant's resources.

- A proposed research plan and schedule of the activities to be undertaken over the grant period (typically 3 years), that includes milestones for each year and an adequate description of methodology and necessary resources to convince a reviewer of its feasibility.
- Clarification of the roles and responsibilities of the PI on collaborative projects.
- The requested resources (manpower, equipment, travel, etc.) that justifies the proposed budget.
- Any institutional support.
- A brief discussion of how the work will contribute to the education of students, if applicable, and identify any potential benefits to society. Include career history of recent former research associates and graduate students.

Data Mangement Plan

All proposals are required to have data management plans. A proposal without one will be rejected as non-compliant with the FOA. Reviewers are asked to evaluate the data management plan. Detailed guidance on developing a plan is provided at http://science.energy.gov/np/funding-opportunities/digital-data-management/.

References (no page limit)

All references to work discussed in the narrative must be included in this section. Citations should include the titles, but otherwise should follow the American Physical Society's style guide. See a summary of citation styles at

http://physics.gac.edu/~huber/misc/aiprefs.htm.

Publications (no page limit)

Scientific and technical publications resulting from work during the previous project period are no longer listed in a renewal proposal. Insert the Summary of Publications table as shown in Attachment 1 below.

Once a renewal proposal is received a task in PAMS will be sent to the PI to enter Renewal Proposal Products. These will include your scientific and technical publications and possibly some other items as well. PAMS will append these to your proposal before it is sent out for review. Members of large collaborations may wish to include only those publications relevant to the review of the current proposal. The Renewal Proposal will not be considered complete and cannot be sent for review until the product list has been submitted.

A list of principal collaborators from the last four years (2 pages maximum)

This information will help the Program Manager to avoid potential conflicts of interest in choosing reviewers for the proposal. List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co- authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. In the case of large collaborations, identify only those with whom you

have worked closely within the collaboration, such as co-spokespersons or joint principal authors. Also, list any individuals who are currently, or have been, coeditors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application.

List the names and current organizational affiliations of your and any co-PIs' graduate advisor(s) and principal postdoctoral sponsor(s). Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates.

Biographical Sketches (subject to a two page limit, discussed below)

There should be a biographical sketch for each scientist beyond the research associate level. The sketch should include:

- Scientist's name, position title, and organization.
- Scientist's degrees, years and field of study for each academic degree.
- A listing of research and professional positions, awards, and honors.
- References to all publications for the past three years along with any earlier publications pertinent to this application.

If this list causes any biographical sketch to exceed two pages, the scientist must select the most pertinent publications to stay within the page limit.

Student Tracking Information

The Office of Nuclear Physics tracks graduate students supported on research grants. Please provide, in tabular form, the following information for each graduate student receiving (in the case of a renewal proposal), or expected to receive (in the case of a new proposal) any support from this grant, during this funding period:

Student	Date Entered Grad. School	Date Joined Group	Degree Program	Date Degree Awarded / (Expected)	Advisor
P.D.Q. Bach	Aug. 2010	Jan. 2012	Ph.D.	(May 2015)	Fermi

Current and Pending Support

Current and pending support of the Principal Investigators should include all current funding and proposals that have been submitted. For grant renewal applications, a discussion of anticipated carryover from the end of the present grant period is necessary and will be reported in PAMS.

Facilities and Resources (including Equipment)

Identify the facilities to be used (Laboratory, Computer, Office, and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities.

Additional Material

No additional material will be accepted with the proposal. Authors of proposals may provide supplementary information by referring to uniform resource locators (URLs) in their proposals. However, reviewers are under no obligation to examine such supplementary information.

<u>List of Suggested Reviewers or Reviewers Not to Include</u> (optional)

Proposers may provide a list of suggested reviewers who they believe are especially well qualified to review the proposal. Proposers also may designate persons they would prefer not review the proposal, indicating why. These suggestions are optional, but should not accompany the proposal. Proposers who wish to use this option must provide the information via direct communication (such as email) with the appropriate Program Manager. The Program Manager handling the proposal will consider the suggestions and may contact the proposer for further information. However, the decision whether or not to use the suggestions remains with the Program Manager.

Continuation Progress Reports

After issuance of an initial award and if multi-year support is recommended, recipients must submit a satisfactory progress report prior to receiving continuation funding for the subsequent budget periods in the remainder of the project period. The required report must be submitted in PAMS 90 days prior to the anticipated continuation funding date (do not submit progress reports through the Grants.gov web based system). You will be sent a task in PAMS to prepare the report 30 days prior to the submission deadline. The email will instruct you on how to log into PAMS and submit the progress report. (PAMS will not remind you that a renewal proposal deadline is approaching.) Note there are significant changes from past practice in the format and information requested in continuation reports.

The information requested in the PAMS forms follows a government wide format. Detailed guidance on the information sought can be found at

http://www.nsf.gov/bfa/dias/policy/rppr/frpprformat_fedreg.pdf

The cover page will be generated automatically in PAMS and contain:

- Federal Agency and Organization Element to Which Report is Submitted
- DOE Award number
- Project Title
- Name of Submitter (PI)
- Recipient Organization (Name and Address)
- Recipient Identifying Number or Account Number, if any
- Project/Grant Period (Start Date, End Date)
- Reporting Period End Date
- Report Term or Frequency (Annual, quarterly, semi-annual, other)

Basic information on the progress in the past year will be collected on a number of pages in PAMS. Answers here should be concise and project oriented. You should assume the audience will be broader than just DOE HQ staff. One PDF file can be attached to the report and detailed physics discussion should be captured there, much as in previous continuation reports as described below.

The **first** section to fill out in PAMS is on **Accomplishments**:

What are the major goals and objectives of the project?

This should be high level and consistent with the abstract in the most recent proposal and public abstract.

What was accomplished under these goals?

This should be project oriented and not get deeply into scientific details. Progress on yearly milestones should be addressed in this section.

What opportunities for training and professional development has the project provided?

Student progress should be discussed here. Update the Student Tracking Information table (described above) in this section.

How have the results been disseminated to communities of interest?

In addition to other comments you choose to make here, include statistics on publications (published, accepted, submitted, in preparation), conference talks, public lectures etc. for the past year. Note that the actual list of publications and talks will be collected on the next page, **Products**.

What do you plan to do during the next reporting period to accomplish the goals and objectives?

Again this should be project oriented and not get into scientific details. Adjustments to the upcoming year's milestones should be addressed in this section.

The **second** section is for the collection of **Products**, i.e. publications, conference presentations as well as intellectual property and other products. While this section is optional we need this information for evaluation of progress. It should be noted that the Products will have to be brought up to date for a renewal proposal to be sent for review in any case.

The third section will collect information on Participants and Other Collaborating Organizations. Each participant, co-PI, post doc, student etc. must be entered. You will be asked for their contribution to the project. This can be short. You will also be asked for countries of international collaboration. If the list is short they should be listed. If the list gets long feel free to use "same as PI" as appropriate or "member countries of XYZ collaboration can be found at website" for large collaborations. You will also be asked to provide information on partner organizations. Include the national labs and international facilities like CERN. Finally you are asked for collaborators. List individually only those outside your group with whom you have a close working relationship. Do not list the full membership of collaborations. Instead, list the name of the collaboration and a link to the membership list.

The **fourth** section has a series of questions on **Impact** of the research. Responses should be concise and high level. Note that all questions are optional with a default of "Nothing to Report". The final item in this section addresses Foreign Expenditures. This information is not currently required and should be left blank until further guidance is provided.

The **fifth** section concerns **Changes/Problems**. Note questions are optional with a default of "Nothing to Report".

Changes in approach and reasons for change and actual or anticipated problems or delays and actions to resolve them.

Include if appropriate but keep high level. Include scientific details in narrative.

Changes that have a significant impact on expenditures.

The Office of Nuclear Physics requires an estimate of the amount of unexpended funds that are anticipated to be left at the end of the current budget period. There is a place to enter this estimate in this PAMS section. If the amount exceeds 10% of the budget period funding, provide an explanation for the excess and a proposed use for the funds. If a change in funding from the planned level is desired, a revised budget page for the continuation year must be included in the attached PDF narrative.

The Office of Science will now be collecting **demographic information** on all participants. This is requested in the **fifth** section. The PI is asked to submit email addresses for all significant contributors listed in the Participants section not already registered in PAMS. The contributors will receive an email asking them to fill out demographic information in PAMS. They will have the option to choose "Do Not Wish to Provide".

Report narrative.

The current format allows a PDF attachment in the Accomplishments section. This should be used to provide the physics content, figures, technical developments and discussion that have typically formed the bulk of continuation reports in the past. The format below should be followed. Your report should be concise in describing your accomplishments and should correlate with the research plan that was approved; no more than a few pages per senior

investigator (academic and research faculty, senior research scientists, etc., not including postdoctoral associates), and not greater than 20 pages, excluding important figures, publication and conference lists etc. It should address the following topics under the reporting categories:

Accomplishments:

- What were the major goals and objectives of your research activity as described in your original research plan given in the grant proposal?
- What was accomplished toward these goals as compared to your proposed schedule? (Major highlights in the previous budget period). Identify individual and your research group's contributions including service work at DOE facilities, if applicable, and particularly if involved with large collaborations.
- The topic of opportunities for training and development provided by the project and the graduate student table should be described in the PAMS reporting. The narrative can be used to connect students and post docs to the progress on their work in a more detailed manner.
- How have the results been disseminated to communities of interest? Usually the publications, conference proceedings and invited talks for the reporting budget entered in the PAMS Products section are sufficient. They need not be repeated here. The narrative should be used to clarify the roles of group members in publications.

Additional Information:

Each of the following topics is addressed in the PAMS reporting sections at a high level. Include detailed scientific and technical discussion here only as necessary.

- Have there been changes in the approach to your goals. If so, why?
- Discuss actual or anticipated problems or delays and briefly describe actions or plans to resolve them.
- Indicate any changes that have a significant impact on the execution of the approved budget for the project period.
- Briefly describe your plans for the next budget period.

Impact:

The topic below is addressed in the PAMS reporting sections at a high level. Include detailed scientific and technical discussion here only as necessary.

• What is the impact of the project on the development of the scientific field and upon advancement of DOE goals?

Attachment 1

Table 3: Summary of Publications

Period: Previous project period (typically last 3 years)

Name	Letter Publications	Other Refereed Journals	Invited Talks
Faculty/Permanent			
Staff			
A. Einstein	3(2)	9(4)	5
R. Feynman(#)		3(2)	
Term and Other Staff			
R. Millikan	5(5)	1(1)	10
Post-docs			
E. Rutherford	3(2)	4(3)	2
J. Doe(*)	2(1)		1
Total	5(2)	10 (4)	18

<u>Under the column "Names"</u>: List all the members of the group for the period covered by this review. Past members of the group should be identified by an asterisk (*) placed against their names. Emeritus members of the group should be identified by a hash (#) placed against their names.

Numbers of publications in parenthesis: Indicate publications for which this individual in your group played a leading or substantive role in conceiving, analyzing, calculating or interpreting the subject matter. For example, a principal author of an analysis reported in a large collaboration paper. Do not include papers on which the individual had normal collaboration interactions. The "Total" should represent unique papers, i.e. not the simple sum of the numbers above.